STATUS OF CLAIMS

Claims 48-51 and 53-69 are pending in this application, claim 52 having been canceled above and claims 1-47 having been cancelled previously. Claims 48 and 66 are the independent claims.

Claim 48 has been amended to recite that the radiation beam is directed onto the workpiece by scanning the radiation beam with a scanning galvanometer to redirect the radiation beam in a desired manner within a planar scan area so that a prescribed pattern is cut in the workpiece. Support for this limitation is provided, for example, in claim 52 (now canceled) and in paragraph 34 and figure 3 of Applicant's specification.

Claim 69 has been amended to recite redirecting the radiation beam generated by the stationary radiation source so that it is scanned about a circumference of the tubular workpiece while the tubular workpiece remains stationary. Support for this limitation may be found, for example, in paragraph 11 of Applicant's specification.

REMARKS

Nonstatutory Obviousness-Type Double Patenting Rejections

Claims 48-69 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over U.S. Patent No. 6,696,667. A Terminal Disclaimer will be filed upon the indication of allowable subject matter.

Rejection of Claims 48-65 Under 35 U.S.C. §103(a)

Claims 48-65 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant's alleged admitted prior art (AAPA) in view of Hella et al. (U.S. Patent No. 4,456,811) and Freedenburg et al. (U.S. Patent No. 5,620,618). This rejection is hereby traversed for the following reasons.

In rejecting claim 52, the limitations of which are now incorporated into independent claim 48, the Examiner notes that neither AAPA nor Hella teach scanning with a galvanometer (see page 11 of the outstanding Office Action). The Examiner asserts, however, that Freedenburg shows a galavanometer for scanning a radiation beam and that it would have been obvious to combine this feature with the combination of

AAPA and Hella. As a basis for concluding that it would be obvious to form the proposed combination, the Examiner first asserts that "One of ordinary skill in the art would appreciate that since Hella et al. is not particular about the type of the scanning device, any device known in the art for scanning a laser beam over the surface of a workpiece could be used." The Examiner then concludes that "It would have been obvious to … modify the combined invention of AAPA and Hella et al. to use a galvanometer for scanning the laser beam as taught by Freedenberg et al. since an assembly of movable pivoted mirrors or lenses and galvanometer are known alternative laser or radiation scanners known in the art, therefore substituting one alternative for the other would have only yielded a predictable result." Applicant respectfully disagrees.

As shown in FIGs. 1 and 2 of Hella, a conical mirror 15 receives an annular laser beam 16 from a laser source 18. The mirror 15 circumferentially directs and focuses separate portions of the annular laser beam 16 to impinge circumferentially along region 19 on the surface 17 of a shaft or workpiece 10. In this way the incident annular laser beam 16 is reflected as a series of annular beams which are superimposed at region 19 on the surface 17 of the shaft 10 to form a reflected beam having at the surface 17 to be heat treated the desired overall width defining region 19 and the desired energy distribution parallel to the longitudinal axis of the shaft 10 (see column 5, lines 37-54 of Hella).

To reiterate, Hella produces an *annular* laser beam 16. The annular beam 16 is directed onto the conical mirror 15. Since the beam 16 is annular when it strikes the conical mirror 15, the mirror 15, in turn, directs the beam 16 around the entire circumference at region 19 of the shaft 10. That is, the entire circumference of the shaft 10 is scanned by the laser beam 16 at the same time. In other words, the scanning is achieved by first providing an annular beam and then redirecting that beam with a conical mirror.

As noted above, the Examiner states that Hella is not particular about the type of scanning device that is used. In other words, the Examiner appears to be asserting that the scanning arrangement (i.e., an annular beam and a conical mirror) in Hella may be replaced with the scanning device shown in Freedenberg (i.e., a galvanometer). Applicants respectfully submit that this assertion is incorrect.

In Hella, the beam simultaneously scans the entire circumference along region 19 of the shaft 10. Among other things, Hella states that this helps to spread out non-uniformities or concentrations in energy distribution over the entire width of the circumferential region (i.e., region 19) being impinged by the beam, thereby optimizing energy distribution and relaxing the requirements imposed by beam alignment, beam shape and beam symmetry (see column 6, lines 21-31 of Hella). If somehow Hella were to use a galvanometer to perform the scanning, the entire circumference of the shaft 10 could not be scanned by the beam at the same time. Rather, the galvanometer would have to be incrementally rotated so that the laser beam is directed or scanned along a circumferential path of the shaft 10 in an incremental manner, beginning at one point on the path and ending at the same point on the path. In other words, each point on the circumferential path is scanned at a different time as the galvanometer redirects the beam. Consequently,since the entire circumferential region 19 would not be impinged by the beam at one time, the use of a galvanometer to perform the scanning would not facilitate a reduction in non-uniformities in the energy distribution over the entire width of the circumferential path.

Since the scanning device employed by Hella achieves a desired result that may not be achieved by a galvanometer, Applicant respectfully submits that in contrast to the Examiner's assertion, Hella would in fact be quite particular about the scanning device he uses. In particular, since a galvanometer would not achieve the goals that Hella desires, Hella would have no reason to substitute his scanning device for a galvanometer.
As stated in MPEP 2144, "The strongest rationale for combining references is a recognition, expressly or impliedly in the prior art or drawn from a convincing line of reasoning based on established scientific principles or legal precedent, that some advantage or expected beneficial result would have been produced by their combination." *In re Sernaker*, 702 F.2d 989, 994-95, 217 USPQ 1, 5-6 (Fed. Cir. 1983). See also *Dystar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick*, 464 F.3d 1356, 1368, 80 USPQ2d 1641, 1651 (Fed. Cir. 2006) ("Indeed, we have repeatedly held that an implicit motivation to combine exists not only when a suggestion may be gleaned from the prior art as a whole, but when the 'improvement' is technology-independent and the combination of references results in a product or process that is more desirable, for

example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient."). In the present case, the use of a galvanometer in the device of Hella combined with AAPA would not result in any advantage or expected beneficial result.

For at least the above reasons, it is respectfully requested that the rejection of independent claim 48 as amended and the claims that depend therefrom under 35 U.S.C. §103(a) as being unpatentable over the alleged AAPA in view of Hella et al. and Freedenburg be reconsidered and withdrawn.

Rejection of Claims 66-69 Under §102(b) and §103(a)

Claims 66-68 stand rejected under 35 U.S.C. §102(b) as being anticipated by Shapovalvo. In addition, claim 69 stands rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA in view of Shapovalvo and Freedenberg. Claims 66-68 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant's alleged admitted prior art (AAPA) in view of Shapovalvo. In addition, claim 69 stands rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA in view of Shapovalvo and Freedenberg. These rejections as they apply to the claims as amended are hereby traversed for the following reasons.

Claim 66 has been amended above to recite that the radiation beam is redirected so that it is scanned about a circumference of the tubular workpiece while the tubular workpiece remains stationary. Accordingly, claim 66 now requires the beam to be scanned about the circumference of the tubular workpiece without movement of either the radiation source or the workpiece.

In contrast to the invention set forth in claim 66, AAPA and Shapovalvo can only scan the beam around the circumference of the workpiece when there is some relative movement between the workpiece and the radiation source. For instance, as the Examiner notes, Shapovalvo states at column 4, lines 27-32 that the stent preform and the laser beam may be moved relative to one another. For at least this reason, it is respectfully requested that the rejection of independent claim 66 and the claims that depend therefrom under 35 U.S.C. §103(a) should be reconsidered and withdrawn.

Conclusion

In view of the foregoing, it is believed that the application is now in condition for allowance, and early passage of this case to issue is respectfully requested. If the Examiner believes there are still unresolved issues, a telephone call to the undersigned would be welcomed.

Respectfully submitted,

Dated: _11/3/09

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